



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE THE APPLICATION OF	)
Lawrence J. Terzo	) Examiner: Elizabeth D. Wood
SERIAL NO. 10/774,302	) Art Unit: 1755
FILED: February 6, 2004	) Docket No. 36194-95262
FOR: Concrete Admixture and	) Customer No. 23644
Use in Low Temperatures	)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION UNDER 37 C.F.R. § 1.132**


1. My name is Lawrence J. Terzo.
2. I am the inventor of U.S. Patent Application No. 10/774,302.
3. I have worked in the concrete production industry since 1980.
4. I am currently employed as a Quality Control Manager for a ready mix concrete producer.
5. One of my responsibilities is to mix concrete batches to customer specifications, including mixing various components and additives.
6. I have read the Office Action of December 15, 2004.
7. I believe that a person in the concrete industry could produce my invention after reading the specification.
8. The terms "non-chloride type accelerator" and "nitrite-based corrosion inhibitor" are known to me to be admixtures used in the concrete industry.
9. I believe that a person familiar with the industry would be able to select an appropriate non-chloride type accelerator and an appropriate nitrite-based corrosion inhibitor based on that which is known in the industry.
10. I am familiar with material specifications in the industry. Such specifications define properties of materials used in mixing concrete and I believe such specifications reflect the current state of knowledge in the industry.
11. The American Society of Testing and Materials (ASTM) specification C494 is the standard specification for properties of concrete admixtures.

12. ASTM Specification C494 Type C admixtures are accelerating admixtures.
13. The Illinois Department of Transportation (IDOT) publishes an approved list of concrete admixtures containing ASTM C494 type C accelerators, a copy of which is attached hereto as Exhibit A.
14. A person familiar with these industry specifications would be able to determine which of the IDOT approved accelerating admixtures are of the non-chloride type without undue experimentation by referring to the manufacturers' specification sheets.
15. IDOT publishes an approved list of corrosion inhibitors, a copy of which is attached hereto as Exhibit B.
16. The IDOT list of approved corrosion inhibitors designates by note (2) that six of the seven approved corrosion inhibitors are a nitrite-based calcium nitrite solution.
17. I believe that these specifications are evidence that persons trying to produce my invention would understand the scope of the terms "non-chloride type accelerator" and "nitrite-based corrosion inhibitor."
18. I declare that all statements made herein of my own knowledge are true and that all the statements made on information and belief are believed to be true; and further that the statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of application 10/774,302 or any patent issued from it.

SIGNATURE

Inventor: Lawrence J. Terzo

Inventor's Signature

 Date 4-16-05



Illinois Department of Transportation  
Bureau of Materials and Physical Research  
**APPROVED LIST OF CONCRETE ADMIXTURES**  
**November 24, 2004**

This list supersedes the October 8, 2004 list.  
Standard Specifications for Road and Bridge Construction, Section 1021 (Adopted January 1, 2002)

**AIR ENTRAINING ADMIXTURES**

<u>Company Name</u>	<u>Producer / Supplier Number</u>	<u>Brand Name</u>	<u>Water Content*** mL/100 kg (oz/cwt.) **</u>	<u>Material Code No.</u>
Conchem Corp.	5058-01	Uniplast AE 200	61 (0.9)	42133
Degussa Admixtures, Inc.	6159-01	MB AE 90	61 (0.9)	42140
Degussa Admixtures, Inc.	6159-01	MBVR Concentrated *	45 (0.7)	42139
Degussa Admixtures, Inc.	6159-01	MBVR Standard *	57 (0.9)	42110
Degussa Admixtures, Inc.	6159-01	Micro-Air	57 (0.9)	42129
Euclid Chemical Company	614-01	AEA 92	61 (0.9)	42153
Euclid Chemical Company	614-01	Air Mix 200	55 (0.8)	42146
Euclid Chemical Company	614-01	Air Mix *	55 (0.8)	42109
Euclid Chemical Company	614-01	Air Mix 250	59 (0.9)	42155
Excel Industries, Inc.	3523-01	Excel AEA *	54 (0.8)	42131
Excel Industries, Inc.	3523-01	MATRIX AEA	52 (0.8)	42158
Excel Industries, Inc.	3523-01	MATRIX 260	61 (0.9)	42162
General Resource Technology	5204-01	Polychem VR*	56 (0.9)	42150
General Resource Technology	5204-01	Polychem VRC	56 (0.9)	42156
General Resource Technology	5204-01	Polychem AE	61 (0.9)	42151
W. R. Grace & Company	767-01	Darex EH	52 (0.8)	42159
W. R. Grace & Company	767-01	Darex II AEA	58 (0.9)	42138
W. R. Grace & Company	767-01	Daravair AT60	26 (0.4)	42161
W. R. Grace & Company	767-01	Daravair 1400	61 (0.9)	42147
W. R. Grace & Company	767-01	Daravair 1000	62 (1.0)	42141
RussTech Admixtures, Inc.	3988-01	RSA-10	61 (0.9)	42144
RussTech Admixtures, Inc.	3988-01	RVR-15 *	55 (0.8)	42130
Sika Corp.	2231-01	Sika A.E.R. *	54 (0.8)	42114
Sika Corp.	2231-01	Sika A.E.A. 15	55 (0.8)	42142
Sika Corp.	2231-01	Sika Air	52 (0.8)	42157

NOTES: \* Vinsol Resin  
\*\* 65.2 mL/100 kg = 1.0 oz/cwt  
\*\*\* Water Content based on 1oz/cwt

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**TYPE A, WATER REDUCING ADMIXTURES**

**INSTRUCTIONS TO SELECT CORRECT TYPE A ADMIXTURE DOSAGE.**

Using the admixture dosage information provided, determine the recommended dosage based on total cement / finely divided minerals and air temperature. Then adjust this initial recommendation for the following: concrete temperature, cement source, finely divided mineral source and percentage, and influence by other chemical admixtures. This adjustment is done by experienced personnel. Any question regarding this adjustment is resolved by mixing a batch of concrete in the lab or field, or by consulting with an admixture technical representative.

Articles 1020.14 (a) and 1020.14 (b) permit in hot weather (plastic concrete temperature reaches 30 °C / 85 °F) an approved water reducing admixture in lieu of a retarding admixture. The water reducing admixture dosage is to be increased by 50 percent over the dosage recommended by this list, for the temperature experienced. However, not all Type A water reducing admixtures will retard a concrete mixture. In addition, the 50 percent dosage increase may be too much. Therefore, consult an admixture technical representative for the dosage and product that will appropriately retard the concrete mixture. Type A admixtures used in this manner shall not be considered as a Type D admixture. If a Type D admixture is needed, refer to that list for the approved products.

Company Name	Producer Supplier No.	Brand Name	Dosage @ 21°C (70° F) mL/100 kg (oz/cwt.) *	Water Content mL/100 kg (oz/cwt.) *	Increase/5.5° C (10° F) mL/100 kg (oz/cwt.) *	Water Content mL/100 kg (oz/cwt.) *	Material Code No.
Conchem Corp.	5085-01	Uniplast 500 N	326 (5.0)	205 (3.2)	33 (0.5)	21 (0.3)	43715
Degussa Admixtures, Inc.	6159-01	Masterpave **	326 (5.0)	192 (3.0)	33 (0.5)	19 (0.3)	43711
Degussa Admixtures, Inc.	6159-01	Masterpave N **	163 (2.5)	90 (1.4)	33 (0.5)	18 (0.3)	43807
Degussa Admixtures, Inc.	6159-01	PolyHeed 997	390 ( 6.0)	205 (3.1)	33 (0.5)	17 (0.3)	43755
Degussa Admixtures, Inc.	6159-01	Pozzolith 220 N	163 ( 2.5)	91 (1.4)	33 (0.5)	18 (0.3)	43713
Euclid Chemical Co.	614-01	Eucon MR	587 (9.0)	319 (4.9)	33 (0.5)	18 (0.3)	43789
Euclid Chemical Co.	614-01	Eucon WR **	260 (4.0)	150 (2.3)	33 (0.5)	19 (0.3)	43781
Euclid Chemical Co.	614-01	Eucon WR 75	195 (3.0)	117 (1.8)	33 (0.5)	20 (0.3)	43706
Euclid Chemical Co.	614-01	Eucon WR 91 **	196 (3.0)	112 (1.7)	33 (0.5)	19 (0.3)	43782
Excel Industries, Inc.	3523-01	Redi-Set	260 (4.0)	150 (2.3)	33 (0.5)	19 (0.3)	43707
Excel Industries, Inc.	3523-01	Redi-Set MR	567 (8.7)	343 (5.3)	33 (0.5)	20 (0.3)	43787
Excel Industries, Inc.	3523-01	Redi Set 720	652 (10.0)	228 (3.5)	33 (0.5)	13 (0.2)	43806
General Resource Technology	5204-01	Melchem	520 (8.0)	343 (5.3)	33 (0.5)	22 (0.3)	43770
General Resource Technology	5204-01	Polychem 400 NC**	260 (4.0)	148 (2.3)	33 (0.5)	19 (0.3)	43769
General Resource Technology	5204-01	Polychem 1000**	260 (4.0)	170 (2.6)	33 (0.5)	22 (0.3)	43760
W. R. Grace & Company	767-01	Daracem 55 **	260 (4.0)	146 (2.2)	33 (0.5)	18 (0.3)	43708
W. R. Grace & Company	767-01	Daracem 65	228 (3.5)	147 (2.3)	33 (0.5)	21 (0.3)	43765
W. R. Grace & Company	767-01	WRDA-82 **	228 (3.5)	123 (1.9)	33 (0.5)	18 (0.3)	43709

\* 65.2 mL/ 100 kg = 1.0 oz/cwt

\*\* Lignin.

Illinois Department of Transportation  
Bureau of Materials and Physical Research  
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**November 24, 2004**

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Standard Specifications for Road and Bridge Construction, Section 1021 (Adopted January 1, 2002)

**TYPE A, WATER REDUCING ADMIXTURES, Continued**

<u>Company Name</u>	<u>Producer Supplier No.</u>	<u>Brand Name</u>	<u>Dosage @ 21°C (70° F) mL/100 kg (oz/cwt.) *</u>	<u>Water Content mL/100 kg (oz/cwt.) *</u>	<u>Increase/5° C (10° F) mL/100 kg (oz/cwt.) *</u>	<u>Water Content mL/100 kg (oz/cwt.) *</u>	<u>Material Code No.</u>
ProMix Technologies	5995-01	Plastimix 720	652 (10.0)	228 (3.5)	33 (0.5)	13 (0.2)	43806
RussTech Admixtures, Inc.	3988-01	FinishEase-NC	456 ( 7.0)	246 (3.8)	33 (0.5)	17 (0.3)	43797
RussTech Admixtures, Inc.	3988-01	LC 400 P	260 ( 4.0)	150 (2.3)	33 (0.5)	19 (0.3)	43774
Sika Corp.	2231-01	Plastocrete 169	404 ( 6.2)	248 (3.8)	33 (0.5)	20 (0.3)	43790
Sika Corp.	2231-01	Sikament HP	567 ( 8.7)	343 (5.3)	33 (0.5)	20 (0.3)	43780
Sika Corp.	2231-01	Sikament 86	782 (12.0)	456 (7.0)	33 (0.5)	20 (0.3)	43794
Sika Corp.	2231-01	Plastocrete 161	195 ( 3.0)	128 (2.0)	33 (0.5)	22 (0.3)	43714

\* 65.2 mL/ 100 kg = 1.0 oz/cwt

\*\* Lignin.

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**November 24, 2004**

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**TYPE B, RETARDING ADMIXTURES**

**INSTRUCTIONS TO SELECT CORRECT TYPE B ADMIXTURE DOSAGE:**

Using the admixture dosage information provided, determine the recommended dosage based on total cement / finely divided minerals and air temperature. Then adjust this initial recommendation for the following: concrete temperature, cement source, finely divided mineral source and percentage, and influence by other chemical admixtures. This adjustment is done by experienced personnel. Any question regarding this adjustment is resolved by mixing a batch of concrete in the lab or field, or by consulting with an admixture technical representative.

<u>Company Name</u>	<u>Producer / Supplier No.</u>	<u>Brand Name</u>	<u>Dosage @ 21°C (70° F) mL/100 kg (oz/cwt.) *</u>	<u>Water Content mL/100 kg (oz/cwt.) *</u>	<u>Change/2.8° C (5° F) mL/100 kg (oz/cwt.) *</u>	<u>Water Content mL/100 kg (oz/cwt.) *</u>	<u>Material Code No.</u>
Degussa Admixtures, Inc.	6159-01	Delvo	326 (5.0)	282 (4.3)	33 (0.5)	29 (0.4)	43757
Degussa Admixtures, Inc.	6159-01	Pozz. 100 XR	163 (2.5)	86 (1.3)	33 (0.5)	17 (0.3)	43719
Degussa Admixtures, Inc.	6159-01	Pozzolith 220 N	228 (3.5)	128 (2.0)	33 (0.5)	18 (0.3)	43713
Excel Industries, Inc.	3523-01	Redi-Set XR	163 (2.5)	88 (1.4)	33 (0.5)	18 (0.3)	43754
RussTech Admixtures, Inc.	3988-01	LC-400 R	195 (3.0)	101 (1.6)	33 (0.5)	17 (0.3)	43762
RussTech Admixtures, Inc.	3988-01	LC-400 P	456 (7.0)	265 (4.1)	33 (0.5)	14 (0.2)	43774
Sika Corp.	2231-01	Plastiment	143 (2.2)	96 (1.5)	33 (0.5)	22 (0.3)	43720
Sika Corp.	2231-01	Plastocrete 161 MR	261 (4.0)	146 (2.2)	33 (0.5)	18 (0.3)	43759
W. R. Grace & Company	767-01	Recover	326 (5.0)	254 (3.9)	33 (0.5)	26 (0.4)	43758

\* 65.2 mL/100 kg = 1.0 oz/cwt

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**TYPE C, ACCELERATING ADMIXTURES**

**INSTRUCTIONS TO SELECT CORRECT TYPE C ADMIXTURE DOSAGE.**

The admixture dosage information provided is based on total cement / finely divided minerals and an air temperature of 21 °C (70 °F). Adjust this initial recommendation for the following: concrete temperature, cement source, finely divided mineral source and percentage, and influence by other chemical admixtures. This adjustment is done by experienced personnel. Any question regarding this adjustment is resolved by mixing a batch of concrete in the lab or field, or by consulting with an admixture technical representative.

Admixtures with a high chloride content, as indicated, shall not be used in concrete containing steel unless allowed by specification or approved by the Engineer. The requirement applies even if the steel is epoxy coated.

<u>Company Name</u>	<u>Producer / Supplier No.</u>	<u>Brand Name</u>	<u>Dosage @ 21° C (70° F)</u> <u>mL/100 kg (oz/cwt.) *</u>	<u>Water Content</u> <u>mL/100 kg (oz/cwt.) *</u>	<u>Material</u> <u>Code No.</u>
Degussa Admixtures, Inc.	6159-01	Pozzolith NC 534	1760 (27.0)	890 (13.6)	43776
Degussa Admixtures, Inc.	6159-01	Pozzutec-20	3260 (50.0)	1646 (25.3)	43728
Euclid Chemical Co.	614-01	Accelguard 80	1630 (24.0)	880 (13.5)	43724
Excel Industries, Inc.	3523-01	Redi Set NS	1304 (20.0)	879 (13.5)	43799
Excel Industries, Inc.	3523-01	Redi-Set NCA	2610(40.0)	1253(19.2)	43811
Excel Industries, Inc.	3523-01	Excel CNI	4890(75.0)	3300(50.6)	43812
General Resource Technology	5204-01	Polychem NCA	1300 (20.0)	533 (8.2)	43772
General Resource Technology	5204-01	Polychem Super Set	1300 (20.0)	527 (8.1)	43773
RussTech Admixtures, Inc.	3988-01	Fast Set 100 HE	4173 (64.0)	2441 (37.4)	43775
RussTech Admixtures, Inc.	3988-01	LCNC-166	2610 (40.0)	1253 (19.2)	43761
RussTech Admixtures, Inc.	3988-01	RussTech RCI	4890 (75.0)	3300 (50.6)	43798
Sika Corp.	2231-01	Sika Rapid-1	1304 (20.0)	879 (13.5)	43793
Sika Corp.	2231-01	Plastocrete 161 HE	2236 (34.3)	1558 (23.9)	43796
W. R. Grace & Company	767-01	Lubricon-NCA	1956 (30.0)	1095 (16.8)	43729
W. R. Grace & Company	767-01	Polarset	1956 (30.0)	1129 (17.3)	43764
W. R. Grace & Company	767-01	DCI	5542 (85.0)	3713 (57.0)	43725

\* 65.2 mL/100 kg = 1.0 oz/cwt

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**November 24, 2004**

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Standard Specifications for Road and Bridge Construction, Section 1021 (Adopted January 1, 2002)

**TYPE D, WATER REDUCING AND RETARDING ADMIXTURES**

**INSTRUCTIONS TO SELECT CORRECT TYPE D ADMIXTURE DOSAGE.**

Using the admixture dosage information provided, determine the recommended dosage based on total cement / finely divided minerals and air temperature. Be advised that an admixture which contains Hydroxylated Carboxylic Acid (HCA) may cause extended bleeding and excessive retardation at the recommended dosage. Knowing this, adjust the initial recommendation for the following: concrete temperature, cement source, finely divided mineral source and percentage, and influence by other chemical admixtures. This adjustment is done by experienced personnel. Any question regarding this adjustment is resolved by mixing a batch of concrete in the lab or field, or by consulting with an admixture technical representative.

Company Name	Producer / Supplier No.	Brand Name	Dosage @		Change-		Material Code No.
			21° C (70° F) mL/100 kg (oz/cwt.) *	Water Content mL/100 kg (oz/cwt.) *	2.8° C (5° F) mL/100 kg (oz/cwt.) *	Water Content mL/100 kg (oz/cwt.) *	
Degussa Admixtures, Inc.	6159-01	Masterpave N ***	163 (2.5)	90 (1.4)	33 (0.5)	18 (0.3)	43807
Degussa Admixtures, Inc.	6159-01	Delvo	326 (5.0)	282 (4.3)	33 (0.5)	29 (0.4)	43757
Degussa Admixtures, Inc.	6159-01	Pozz. 100 XR	163 (2.5)	86 (1.3)	33 (0.5)	17 (0.3)	43719
Degussa Admixtures, Inc.	6159-01	Pozzoloth 220 N	228 (3.5)	128 (2.0)	33 (0.5)	18 (0.3)	43713
Euclid Chemical Co.	614-01	Eucon Retarder 75 **	195 (3.0)	132 (2.0)	33 (0.5)	22 (0.3)	43731
Euclid Chemical Co.	614-01	Eucon Retarder 100 **	163 (2.5)	101 (1.6)	33 (0.5)	20 (0.3)	43783
Excel Industries, Inc.	3523-01	Redi-Set R **	143 (2.2)	97 (1.5)	33 (0.5)	22 (0.3)	43732
Excel Industries, Inc.	3523-01	Redi-Set XR	163 (2.5)	88 (1.4)	33 (0.5)	18 (0.3)	43754
General Resource Technology	5204-01	Polychem R	163 (2.5)	89 (1.4)	33 (0.5)	18 (0.3)	43771
W. R. Grace & Company	767-01	Daratard 17	163 (2.5)	82 (1.3)	33 (0.5)	17 (0.3)	43733
W. R. Grace & Company	767-01	Recover	326 (5.0)	254 (3.9)	33 (0.5)	26 (0.4)	43758

\* 65.2 mL/100 kg = 1.0 oz/cwt

\*\* Contains Hydroxylated Carboxylic Acid (HCA).

\*\*\* Lignin



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**TYPE D, WATER REDUCING AND RETARDING ADMIXTURES, Continued**

<u>Company Name</u>	<u>Producer / Supplier No.</u>	<u>Brand Name</u>	<u>Dosage @</u>		<u>Change-</u>		<u>Water Content</u>		<u>Material Code No.</u>
			<u>21° C (70° F)</u>	<u>21° C (70° F)</u>	<u>2.8° C (5° F)</u>	<u>2.8° C (5° F)</u>	<u>mL/100 kg</u>	<u>mL/100 kg</u>	
			<u>(oz/cwt.) *</u>	<u>(oz/cwt.) *</u>	<u>(oz/cwt.) *</u>	<u>(oz/cwt.) *</u>	<u>(oz/cwt.) *</u>	<u>(oz/cwt.) *</u>	
RussTech Admixtures, Inc.	3988-01	LC-400 P	456 (7.0)	265 (4.1)	33 (0.5)	33 (0.5)	14 (0.2)	14 (0.2)	43774
RussTech Admixtures, Inc.	3988-01	LC-400 R	195 (3.0)	101 (1.6)	33 (0.5)	33 (0.5)	17 (0.3)	17 (0.3)	43762
Sika Corp.	2231-01	Plastiment **	143 (2.2)	95 (1.5)	33 (0.5)	33 (0.5)	22 (0.3)	22 (0.3)	43720
Sika Corp.	2231-01	Plastocrete 161 MR	260 (4.0)	146 (2.2)	33 (0.5)	33 (0.5)	18 (0.3)	18 (0.3)	43759

\* 65.2 mL/100kg = 1.0 oz/cwt

\*\* Contains Hydroxylated Carboxylic Acid (HCA).

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**November 24, 2004**

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**TYPE E, WATER REDUCING AND ACCELERATING ADMIXTURES**

**INSTRUCTIONS TO SELECT CORRECT TYPE E ADMIXTURE DOSAGE.**

The admixture dosage information provided is based on total cement / finely divided minerals and an air temperature of 21 °C (70 °F). Adjust this initial recommendation for the following: concrete temperature, cement source, finely divided mineral source and percentage, and influence by other chemical admixtures. This adjustment is done by experienced personnel. Any question regarding this adjustment is resolved by mixing a batch of concrete in the lab or field, or by consulting with an admixture technical representative.

Admixtures with a high chloride content, as indicated, shall not be used in concrete containing steel unless allowed by specification or approved by the Engineer. The requirement applies even if the steel is epoxy coated.

<u>Company Name</u>	<u>Producer / Supplier No.</u>	<u>Brand Name</u>	<u>Dosage @ 21° C (70° F) mL/100 kg (oz/cwt.) *</u>	<u>Water Content mL/100 kg (oz/cwt.) *</u>	<u>Material Code No.</u>
Degussa Admixtures, Inc.	6159-01	Pozutec-20	3260 (50.0)	1646 (25.3)	43728
Euclid Chemical Co.	614-01	Accelguard 80	1565 (24.0)	845 (13.0)	43724
Euclid Chemical Co.	614-01	Accelguard HE	1826 (28.0)	1097 (16.8)	43788
General Resource Technology	5204-01	PolyChem HE	1043 (16.0)	364 ( 5.6)	43802
W. R. Grace & Company	767-01	Lubricon-NCA	1965 (30.0)	1100 (16.9)	43729

\* 65.2 mL/100 kg = 1.0 oz/cwt

\*\* High Chloride Content (25.0% - 50.0%).

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**TYPE F, HIGH RANGE WATER REDUCING ADMIXTURES (SUPERPLASTICIZERS)**

**INSTRUCTIONS TO SELECT CORRECT TYPE F ADMIXTURE DOSAGE.**

The admixture dosage information provided is based on total cement / finely divided minerals and an air temperature of 21 °C (70 °F). Adjust this initial recommendation for the following: concrete temperature, cement source, finely divided mineral source and percentage, and influence by other chemical admixtures. This adjustment is done by experienced personnel. Any question regarding this adjustment is resolved by mixing a batch of concrete in the lab or field, or by consulting with an admixture technical representative.

<u>Company Name</u>	<u>Producer / Supplier No.</u>	<u>Brand Name</u>	<u>Dosage @ 21°C (70° F) mL/100 kg (oz/cwt.) *</u>	<u>Water Content mL/100 kg (oz/cwt.) *</u>	<u>Material Code No.</u>
AXIM Italcementi Group	4695-01	CATEXOL Allegro 122	522 (8.0)	407 (6.2)	43815
CHRYSO Inc.	6173-01	Chrysofluid Optima 200	417 (6.4)	333 (5.1)	43816
CHRYSO Inc.	6173-01	Chrysofluid Pemia 180	319 (4.9)	251 (3.9)	43814
Conchem Corp.	5085-01	Uniplast 500 S	1304 (20.0)	874 (13.4)	43748
Degussa Admixtures, Inc.	6159-01	Rheobild 1000	652 (10.0)	388 ( 6.0)	43746
Degussa Admixtures, Inc.	6159-01	Glenium 3000 NS	333 ( 5.1)	228 ( 3.5)	43791
Euclid Chemical Co.	614-01	Eucon 37	652 (10.0)	391 ( 6.0)	43740
Euclid Chemical Co.	614-01	Eucon 1037	1043 (16.0)	430 (6.6)	43800
Excel Industries, Inc.	3523-01	Ready Set 720	652 (10.0)	228 ( 3.5)	43806
General Resource Technology	5204-01	Melchem	910 (14.0)	710 (10.9)	43770
General Resource Technology	5204-01	Polychem 3000	1173 (18.0)	969 (14.8)	43810
ProMix Technologies	5995-01	Plastimix 720	652 (10.0)	228 ( 3.5)	43806
RussTech Admixtures, Inc.	3988-01	Super Flo 2000 RM	1173 (18.0)	969 (14.8)	43803
W. R. Grace & Company	767-01	ADVA Cast	390 ( 6.0)	295 ( 4.5)	43785
W. R. Grace & Company	767-01	Daracem 19	652 (10.0)	395 ( 6.1)	43743
W. R. Grace & Company	767-01	Daracem 100	456 ( 7.0)	271 ( 4.2)	43742
W. R. Grace & Company	767-01	ADVA Flow	411 ( 6.3)	300 ( 4.6)	43784
W. R. Grace & Company	767-01	Daracem ML 330	782 (12.0)	528 ( 8.1)	43738
W. R. Grace & Company	767-01	Daracem ML 500	522 ( 8.0)	308 ( 4.7)	43737
W. R. Grace & Company	767-01	AdvaCast 530	326 ( 5.0)	217 ( 3.3)	43813

\* 65.2 mL/100 kg = 1.0 oz/cwt

Illinois Department of Transportation  
Bureau of Materials and Physical Research  
**APPROVED LIST OF CONCRETE ADMIXTURES**  
**November 24, 2004**

This list supersedes the October 8, 2004 list.

Standard Specifications for Road and Bridge Construction, Section 1021 (Adopted January 1, 2002)

**TYPE F, HIGH RANGE WATER REDUCING ADMIXTURES (SUPERPLASTICIZERS), Continued**

<u>Company Name</u>	<u>Producer / Supplier No.</u>	<u>Brand Name</u>	<u>Dosage @ 21° (70° F) mL/100 kg (oz/cwt.) *</u>	<u>Water Content mL/100 kg (oz/cwt.) *</u>	<u>Material Code No.</u>
Sika Corp.	2231-01	Sikament 300	522 ( 8.0)	313 ( 4.8)	43747
Sika Corp.	2231-01	Sikament 10 ESL	780 (12.0)	608 ( 9.4)	43778
Sika Corp.	2231-01	Sikament 86	782 (12.0)	454 ( 7.0)	43794
Sika Corp.	2231-01	Viscocrete 6100	325 ( 5.0)	215 ( 3.3)	43809

\* 65.2 mL/100 kg = 1.0oz/cwt

Illinois Department of Transportation  
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**APPROVED LIST OF CONCRETE ADMIXTURES**  
**November 24, 2004**

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Standard Specifications for Road and Bridge Construction, Section 1021 (Adopted January 1, 2002)

**TYPE G, HIGH RANGE WATER REDUCING AND RETARDING ADMIXTURES (SUPERPLASTICIZERS)**

**INSTRUCTIONS TO SELECT CORRECT TYPE G ADMIXTURE DOSAGE.**

The admixture dosage information provided is based on total cement / finely divided minerals and an air temperature of 21 °C (70 °F). Adjust this initial recommendation for the following: concrete temperature, cement source, finely divided mineral source and percentage, and influence by other chemical admixtures. This adjustment is done by experienced personnel. Any question regarding this adjustment is resolved by mixing a batch of concrete in the lab or field, or by consulting with an admixture technical representative.

<u>Company Name</u>	<u>Producer / Supplier No.</u>	<u>Brand Name</u>	<u>Dosage @ 20°C (70° F) mL/100 kg (oz/cwt.) *</u>	<u>Water Content mL/100 kg (oz/cwt.) *</u>	<u>Change/2.8° C (5° F) mL/100 kg (oz/cwt.) *</u>	<u>Water Content mL/100 kg (oz/cwt.) *</u>	<u>Material Code No.</u>
Euclid Chemical Co.	614-01	Eucon 537	652 (10.0)	375 (5.8)	33 (0.5)	19 (0.3)	43751
W. R. Grace & Company	767-01	Daracem-100	456 ( 7.0)	271 (4.2)	33 (0.5)	20 (0.3)	43742

\* 65.2 mL/100 kg = 1.0 oz/cwt

Illinois Department of Transportation  
Bureau of Materials and Physical Research  
**APPROVED LIST OF CONCRETE ADMIXTURES**

**October 8, 2004**

This list supersedes the October 1, 2004 list.  
Contract Special Provision

**INSTRUCTIONS TO SELECT CORRECT SELF-CONSOLIDATING ADMIXTURE DOSAGE**

Consult with an admixture technical representative or mix a trial batch of concrete.

**ONE COMPONENT ADMIXTURE SYSTEM**

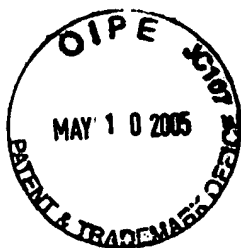
<u>Company Name</u>	<u>Producer / Supplier No.</u>	<u>Brand Name</u>	<u>Water Content mL/100 kg (oz/cwt.)*</u>	<u>Material Code No.</u>
AXIM Italcementi Group	4695-01	CATEXOL Allegro 122	407 (6.2)	43815
Degussa Admixtures, Inc.	6159-01	Glenium 3000 NS	228 ( 3.5)	43791
Excel Industries, Inc.	3523-01	Redi-Set SPC	969 (14.8)	43808
General Resource Technology	5204-01	Polychem 3000	969 (14.8)	43810
RussTech Admixtures, Inc.	3988-01	Superflo 2000 RM	969 (14.8)	43803
Sika Corp.	2231-01	Viscocrete 6100	215 ( 3.3)	43809
W. R. Grace & Company	767-01	AdvaCast 530	217 ( 3.3)	43813

**TWO COMPONENT ADMIXTURE SYSTEM**

<u>Company Name</u>	<u>Producer / Supplier No.</u>	<u>Brand Name</u>	<u>Water Content mL/100 kg (oz/cwt.)*</u>	<u>Material Code No.</u>
None available at this time.				

\* 65.2 mL/100 kg = 1.0 oz/cwt

\*\* Viscosity Modifying Admixture (VMA)



Illinois Department of Transportation  
Bureau of Materials and Physical Research  
**APPROVED LIST OF CORROSION INHIBITORS**  
**September 3, 2004**

This list supersedes the August 13, 2004 list.  
Special Provision for Corrosion Inhibitor (Revised July 1, 1999)

Degussa Admixtures, Inc.  
23700 Chagrin Blvd.  
Cleveland, OH 44122-5554  
Phone: 216-839-7072  
Garry Culton  
Producer/Supplier No. 6159-01  
Material Code No. 43786  
**"RHEOCRETE CNI"** <sup>(1) (2)</sup>  
Material Code No. 43850  
**"RHEOCRETE 222+"** <sup>(1)</sup>

Excel Industries, Inc.  
P.O. Box 2402  
Des Plaines, IL 60018  
Phone: 630-834-1690  
Robert L. Eiter, Jr.  
Producer/Supplier No. 3523-01  
Material Code 43812  
**"EXCEL CNI"** <sup>(2)</sup>

General Resource Technology  
2978 Center Court  
Eagon, MN 55121  
Phone: 651-454-4151  
William R. Collins  
Producer/Supplier No. 5204-01  
Material Code No. 43801  
**"POLYCHEM CORROSION INHIBITOR (PCI)"** <sup>(2)</sup>

RussTech Admixtures, Inc.  
P.O. Box 23377  
Louisville, KY 40223  
Phone: 502-267-7700  
Gary D. Russell  
Producer/Supplier No. 3988-01  
Material Code No. 43798  
**"RUSSTECH RCI"** <sup>(2)</sup>



Illinois Department of Transportation  
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**APPROVED LIST OF CORROSION INHIBITORS**  
**September 3, 2004**

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Special Provision for Corrosion Inhibitor (Revised July 1, 1999)

Sika Corporation  
201 Polito Avenue  
Lyndhurst, New Jersey 07071  
Phone: 201-933-6225  
Darmawan Ludirdja  
Producer/Supplier No. 2231-01  
Material Code No. 43805  
**"SIKA CNI"** <sup>(2)</sup>

W. R. Grace & Co.  
62 Whittemore Ave.  
Cambridge, MA 02140-1692  
Phone: 800-354-5414  
Denise I. White  
Technical Service Support Specialist  
Material Code No. 43725  
**"DAREX CORROSION INHIBITOR (DCI)"** <sup>(1) (2)</sup>

(1) Dosage rate shall be according to the Special Provision for Corrosion Inhibitor.

(2) Calcium Nitrite Solution